



# *Money, Energy, and Sustainability*

A policy guide for City of Morgantown employees  
on reducing energy use and waste in local government operations



**Dear City of Morgantown Employee:**

This handbook has been prepared to address a number of concerns:

- The rising and fluctuating costs of energy, from electricity to fuel oil to gasoline, which impact municipal programs and services.
- The need to trim costs of local government operations in order to reduce the burden on taxpayers, who are also feeling financially stressed.
- Recognition of the impacts of fossil fuel combustion and depletion on the environment, public health, and national security.

Around the country and around the world, governments, businesses, schools, and households are looking for ways to reduce energy consumption and, in the process, save money. Many are also learning about energy alternatives, and are thinking about the impact our choices today will have on future generations.

Please note that this handbook provides policy guidelines that should be carried out with common sense. It will not be possible or even wise to strictly follow every guideline in every circumstance, particularly when safety, security, or work performance would be unduly impacted. Due to pre-existing budgets, it is understood that not all departments can make these changes immediately. However, we must be vigilant and work these efficiency measures in as time and resources allow.

While the policies in this handbook have been prepared specifically for City employees, many of them can also be applied, with little or no modification, to households and businesses. It is our hope that they will be helpful to others beyond the City of Morgantown workforce.

Ideas for future editions of this handbook are welcome. The most current version of the handbook will be made available on the City of Morgantown website: [www.morgantownwv.gov](http://www.morgantownwv.gov)

## Part 1: Office and Computer Equipment and Appliances



**POLICY:** City of Morgantown employees will, at all times, practice energy conservation measures in their use of all office and computer equipment and appliances.

**RESPONSIBILITIES:** All City employees are responsible for utilizing City office and computer equipment and appliances in a manner that will ensure maximum energy-efficiency without unduly impacting work performance, safety, or security. Within this framework, the following

strategies will be practiced:

- All employees are expected to understand and follow operating and maintenance procedures for the equipment they use.
- Enable all “Energy Star” energy-saving features on personal computers, computer monitors, printers, fax machines, vending machines, copiers, scanners, plotters, etc.
- Set copiers and printers (as default) to make double-sided copies whenever possible.
- Set copiers and printers (as default) to make black and white copies rather than color, unless color is the logical default.
- For desktop computers, select “Power Saver” in the control panel hardware power options. Then “Change Plan Settings”\* as follows:
  - Turn off display - after 10 minutes.
  - Turn off hard disks - never.
  - Sleep after - never.
  - Sleep hibernate - after 30 minutes.

**Note:** Close network applications if you anticipate being away from your computer for 30 minutes or more.

\*This is for Windows 10 - Check with I.T. staff if your computer uses a different operating system. System standby may be more appropriate than hibernation for some older (slower) computers.

- Disable screen savers on personal computers if they interfere with the power options described above.
- Turn off computer monitors that are not Energy Star compliant if inactivity of 30 minutes or more is anticipated.

*Did you know...?*

*The City pays 71% more for a color-printed page than a black and white one.*

- Turn off desktop computers, printers, scanners, etc. and shut off power via the power strip/surge protector at the end of each work day.
- Energy efficient equipment and operational features will not be defeated, removed, modified, changed, or discontinued without prior written notification and concurrence of the department director.
- Employees will use refrigerators, microwave ovens, coffee-making equipment, etc. designated for group use rather than keeping such equipment for their own personal use.
- Whenever possible, all printing, copying, faxing, and scanning will be done on centrally located machines unless personal machines are assigned to ensure confidentiality.
- The last person to leave a department or wing of offices should make sure all centrally located office equipment that can be turned off is turned off.

### CITY MANAGER/DEPARTMENT HEAD RESPONSIBILITIES:

- To the extent possible, and in compliance with procurement regulations, all new computer equipment and appliances purchased will be Energy Star compliant.
- Old energy-inefficient appliances should be replaced with new Energy Star appliances, even if the old appliance is still operational.
- If an employee brings an appliance from home, department heads should encourage the use of Energy Star-rated appliances and/or replace old appliances with Energy Star-rated ones.
- When applicable, employees may be provided with adequate training to ensure proper use of new energy-efficient appliances, including use of energy-saving features.

### IT STAFF RESPONSIBILITIES:

- Maintain a complete inventory of all City computer/printing equipment and schedule repair and replacement when necessary.
- Ensure that each office or workstation is equipped with a power strip/surge protector to facilitate turning off power to computer equipment at the end of each work day.
- Schedule computer backups so as not to preclude users from turning off power to computers at the end of the work day.
- Set up a replacement schedule to replace



older/inefficient power strip/surge protectors, monitors, computers, and printers.

- Ensure that energy saving features are enabled on all computer equipment, including defaults for double-sided and black-and-white printing.
- To the extent possible, and in compliance with procurement regulations, all new computer equipment purchased will be Energy Star compliant.

#### **POLICE DEPARTMENT RESPONSIBILITIES:**

- The Morgantown Police Department will, over time, upgrade its in-vehicle laptops and similar computers to ruggedized mobile data computers, or MDCs. These are purpose-built computers that last longer and do more of the field functions needed in moving, vibrating vehicles.

#### *Common Myths and Misconceptions About Computers and Energy Use*

*Switching computers on and off frequently reduces their service life. Not true.* Today's computers are designed to handle 40,000 on/off cycles, and that's a number you're not likely to reach before your computer becomes outdated.

*Leaving a computer on all day uses less energy than turning it off and back on at different periods during the day. Not true.* The small surge of power it takes to power up a computer is still much smaller than the amount used to keep it on for lengthy periods of time.

*"Screen savers" save energy. Not true.* Screen savers (which don't save screens, either) require at least 42 watts of power; those with 3D graphics can draw as much as 114.5 watts!

*Your computer uses zero energy when "off." Not true.* Unless it's unplugged, the computer uses "flea power," or about 2.3 watts, to maintain local area network connectivity. Likewise, in "hibernate" mode, it uses 2.3 watts. In "sleep" mode, it uses about 3.1 watts. The good news is that computer monitors really do use zero energy when turned off.

## **Part 2: Lighting**

#### **POLICIES:**

- City of Morgantown employees will at all times practice energy conservation measures in their use of all City lights.
- Lights in all building areas and workspaces will not be turned on or left on unless needed.
- Exterior lighting systems, including the façade areas, parking lots, and security lighting are controlled by automated control systems. Exterior lighting not required for egress or security will not be operated during daylight hours. (Parking garages are required to maintain 24/7 lighting.)

**RESPONSIBILITIES:** All City employees are responsible for utilizing lights in City buildings in a manner that will ensure maximum energy-efficiency without unduly impacting work performance, safety, or security. Energy-efficient automatic light switches have been installed in many, if not all, city offices that are occupied on a daily basis, and that already serves municipal energy standards well. Within this framework, the following strategies will be practiced:

- Except for security lighting during non-work hours, all lights will be turned off in rooms that are likely to remain unoccupied for more than 30 minutes (desk lamps, etc). Workers who use offices or shop areas outside of normal hours should minimize unnecessary overhead lighting.
- Use the minimum amount of light needed by limiting the number of lights turned on. Use task lighting instead of overhead lighting when possible.
- Use daylight when possible in place of artificial light sources.
- For maximum light levels, keep lamps, reflectors, shields, and shades clean.
- The last person to leave a department or wing of offices should make sure all lights are turned off, except those deemed essential for security and safety.

#### *Did you know...?*

*If all of corporate America installed energy efficient lighting systems, approximately \$250/year in energy costs per square foot of floor space would be saved.*

*Of the over 5 million commercial buildings and industrial plants in America, 30 percent of them are being operated inefficiently. If those buildings raised their energy efficiency by just 10 %, over \$20 billion would be saved.*

#### DEPARTMENT DIRECTOR RESPONSIBILITIES:

- Ensure that all employees are familiar with how the lighting system in their offices and workspaces is supposed to operate (lights on when you enter, idle after a certain time turns them off.) Be sure they turn off work and detail lights at the end of the day.

#### BUILDING MAINTENANCE STAFF RESPONSIBILITIES:

- Use manual and automatic lighting controls to manage electrical usage during occupied and unoccupied periods.
- Perform lighting replacement and maintenance, including timely lamp replacement. Group relamping will be implemented wherever feasible, when determined to be cost-effective.

### Part 3: Heating and Cooling

**POLICY:** The City of Morgantown will utilize the following strategies to reduce energy use relating to heating and cooling:



- Invest in all energy-efficiency measures pertaining to heating and cooling with payback periods of 10 years or less.
- Conduct energy audits with assistance from the Morgantown Green Team for all City buildings and implement recommendations for weatherization and other measures to reduce energy use.
- Ensure that all new and renovated City buildings are constructed with energy-efficiency and other conservation goals in mind.

**RESPONSIBILITIES:** All City employees are responsible for utilizing City buildings in a manner that will ensure maximum energy-efficiency without unduly impacting work performance, safety, or security. Morgantown's City Hall is a time-tested building that has served several capacities, and HVAC is not building-wide. Central heat is in place, but full building-wide air conditioning doesn't exist. Because of this, the following strategies will be practiced *wherever practical*:

- If applicable, set heating thermostat set points to 68 degrees F and cooling thermostat set points to 75 degrees F in offices and work areas.
- If you have them, keep air registers and vents clear to allow air to flow freely throughout the room.

- Don't leave radiators set at top heat, especially on weekends.
- In most cases, keep all windows closed in City buildings during periods when indoor heating or cooling systems are operating. Employees should ensure that windows that have been opened are closed when they leave for the day.
- Use caution and common sense when using individual space heaters or air conditioners for heating and cooling.

#### BUILDING MAINTENANCE STAFF RESPONSIBILITIES:

- Maintain City buildings for maximum efficiency, including weatherization to building windows.
- Maximize the use of energy management systems to reduce energy consumption by scheduling shut down of appropriate HVAC equipment during times when the space served is unoccupied.
- Ensure that up-to-date operational procedures and manuals are available.
- Implement preventive maintenance programs for all building equipment and systems.
- Wherever possible, implement a monitoring program that tracks and documents building systems performance to help identify and diagnose potential problems and track the effectiveness of the O&M program.

#### FIRE DEPARTMENT RESPONSIBILITIES:

- Look into ways to maximize heating and cooling efforts in the two stations that cannot utilize or install insulation due to the porcelain block construction.

### Part 4: Vehicle Use

**POLICY:** The City of Morgantown will, at all times, implement all available fuel conservation strategies for the City fleet, provided such strategies will not disrupt services to the health, welfare, and safety of city residents.

**RESPONSIBILITIES:** Vehicle operators are responsible for operating City vehicles in a manner that will ensure maximum fuel-efficiency without unduly impacting work performance, safety, or security. Within this framework, the following strategies will be practiced:

- Limit unnecessary trips. Plan trips to minimize mileage. Remove extra weight from the vehicle; only carry those items you need.

- Warm up engines on gasoline-powered cars and pick-up trucks (excluding snow plows and other larger equipment) according to the following guidelines:
  - At temperatures above 20° F, warm up for no more than 30 seconds or as long as it takes to manually remove snow and ice from windows. (In cold weather, longer warm-up times may be appropriate for older vehicles or those that use conventional rather than synthetic oil.)
  - At temperatures of 20° or less, plug in vehicles equipped with engine heaters for 2-3 hours before warming up 30 seconds to 10 minutes, depending on temperature.
- Practice moderation in driving; i.e., do not over-accelerate; avoid constant braking. Drive at or under the speed limit. Try to anticipate stops and let vehicle coast down as much as possible.
- Keep tires properly inflated. Check pressure monthly and before long trips.
- Take vehicles to Public Works fleet maintenance for maintenance as scheduled.
- Try not to allow gasoline-powered vehicles to idle for more than 30 seconds, or diesel-powered vehicles for more than three minutes in a 60-minute period, except in the following situations:
  - A vehicle may idle while forced to remain motionless because of traffic congestion, when required to yield right of way to responding emergency vehicles, at an official traffic control device or signal, or at the direction of a law enforcement official.
  - A vehicle may idle to prevent a safety or health emergency.
  - A vehicle may idle to operate auxiliary equipment such as onboard operations for Public Works and law enforcement.
  - An emergency vehicle or any vehicle being used in an emergency capacity may idle while in emergency or training mode.
  - A vehicle may idle for maintenance, servicing, repairing, or diagnostic purposes if idling is required for such activity.
  - See previous bullets regarding engine warm-up time.
- Use the most fuel-efficient vehicle available that will serve the purpose for any given trip.
- If so equipped, use overdrive gear at cruising speeds.
- If so equipped, use cruise control at cruising speeds.

#### **CITY MANAGER/DEPARTMENT HEAD RESPONSIBILITIES:**

- Develop a schedule to retire older, less efficient vehicles.
- Buy the most fuel efficient vehicle that will meet most of the department needs, and rent other vehicles for infrequent needs.

#### *Did you know...?*

- An idling vehicle gets zero miles per gallon.
- Gentle acceleration and braking can improve fuel economy by up to 33%. Slow-and-go (versus stop-and-go) saves fuel because it takes more energy to move a stopped vehicle than to keep a vehicle moving.
- Every 5 miles over 60 miles-per-hour is like paying an additional 36 cents per gallon of gas (with prices at \$4/gallon).
- Today's automobiles that use synthetic oil do not need a warm-up period before driving. At temperatures above 20°, running your engine for 30 seconds (long enough for the oil to circulate throughout the engine) is all you need. Your vehicle will reach its optimum operating temperature much faster when you're driving, rather than idling.

*Source: fueleconomy.gov and ecodrivingusa.com*

- Compare electric, hybrid, or other alternative-fueled vehicles for greater fuel efficiency before purchase when available, practical, and where lasting environmental impact is minimized.
- Assign the most fuel efficient vehicles to employees who drive the most miles.
- Provide adequate fleet maintenance staff, adequate training for staff, and adequate resources to maintain City fleet for maximum fuel efficiency.
- Ensure that City vehicles are used for work purposes only.
- Promote teleconferencing as an alternative to driving to meetings, when appropriate systems can be made available.
- To reduce vehicle miles traveled for employee commutes,
  - Promote pedestrian, bicycle, transit, and rideshare options.
  - Make bike parking visible, accessible, and if possible, under cover at all City buildings.

#### **FLEET MAINTENANCE RESPONSIBILITIES:**

- Monitor the preventative maintenance program to ensure that vehicle maintenance is performed according to established schedule.
- Keep tires properly inflated and wheels aligned.



- Plan to track fuel consumption on all vehicles as a means of detecting problems. Develop a plan to monitor and report fuel consumption by department.
- Use API-certified “energy conserving” motor oil if possible, either conventional or synthetic. Use the service classification and viscosity specified for each vehicle.

## Part 5: Recycling and Waste Reduction

**POLICY:** It will be the policy of all City employees to implement recycling and waste reduction to the maximum extent practical taking into consideration the amount of recyclables generated in each facility, what materials can be recycled, storage space, and fire and safety regulations.

**COLLECTION OF MATERIALS:** Materials will be collected where they are generated. This involves placing recycling bins for paper products at each work station, bins for office paper near copiers, containers near printers to collect toner cartridges, bins for glass, aluminum, and plastic in kitchen areas, and bins for cardboard, newspapers, and household batteries in designated central locations. In addition, electronics to be recycled will be stored as necessary and then transported for recycling during scheduled Morgantown electronics recycling events.



### RESPONSIBILITIES:

- All City employees will make use of recycling receptacles and programs as much as possible.
- Employees are also encouraged to practice waste reduction by reducing the amount and toxicity of trash thrown away and by reusing containers and products when practical. Following are suggested practices for conserving valuable resources, saving energy, and reducing waste:
  - Reuse paper clips, folders, rubber bands, and binders.
  - Reuse file folders – fold them in reverse or cover up old labels with new ones.

- Make double-sided copies. Conserve paper by reducing printed page margins.
- Print and copy only what you need.
- Use email or voice mail rather than paper.
- Use scrap paper for internal memos.
- Proof documents on the screen.
- Replace fax cover sheets with fax-it sticky notes.
- Store documents electronically.
- Reuse envelopes, boxes, and packaging materials.
- Donate old magazines to hospitals or nursing homes.
- Route and share newspapers and magazines.
- Print addresses directly on envelopes instead of using labels.
- Mail items in the smallest envelopes or boxes they will fit in.
- Remove your name from unwanted mailing lists.
- Use mechanical pencils and refillable pens and tape dispensers.
- Use overheads or whiteboards instead of handouts for presentations.
- Return unneeded supplies to the supply closet.
- Use a washable mug or cup for beverages.
- Drink tap water rather than bottled water.
- Bring your lunch in reusable containers or bags.
- Donate unused food to local food recovery programs.
- Share other waste prevention ideas with your supervisor



Major source: [epa.gov/epawaste/partnerships/wastewise/checklist.htm](http://epa.gov/epawaste/partnerships/wastewise/checklist.htm)

### DEPARTMENT HEAD RESPONSIBILITIES:

- Provide resources for setting up recycling receptacles in all buildings, including fire stations.

### PUBLIC WORKS RESPONSIBILITIES:

- Properly dispose of motor oils and other petroleum-based products in an environmentally responsible manner.



### *Did you know...?*

- West Virginians produce about 4.4 pounds of trash per person each day?
- 70% of the trash America throws away each day is compostable: wood, paper, food waste and yard waste.
- Americans throw away enough aluminum to rebuild out entire commercial air fleet every three months.
- The energy saved from recycling one soda can will run your TV for three hours.
- Changing the margin default in Microsoft Word from 1.25" to .75" would reduce your paper use by 4.75%.

*Sources: Natural Resources Defense Council,  
DITC Environmental Education Foundation, Inc.*

## Part 6: Water Use

**POLICY:** The City of Morgantown will, at all times, practice water conservation measures in the use of water.

**RESPONSIBILITIES:** All City employees are responsible for utilizing water in City buildings and work processes in a manner that emphasizes conservation without unduly impacting work performance, safety, or security; including compliance with the following strategies:

- Watch for water leaks and plumbing issues. Report issues and request repairs though facility staff.
- Consider alternatives to discretionary uses of water that are not related to health and safety. For example, use a broom instead of a hose to routinely clean sidewalks and driveways.
- Leave no water running unnecessarily.

### *Did you know...?*

The average Morgantonian uses 2,000 gallons per person per month.

Four WV cities are tied for the highest water and sewer cost at \$51.28 a month (for 4,500 gallons). Morgantown enjoys very low water and sewer costs at just \$8.98 a month.

*Source: MUB.org*

- Use no more water than needed for a task.

### **DEPARTMENT HEAD RESPONSIBILITIES:**

- When necessary, work with all employees to reduce water use in kitchens, break rooms, shop areas, and other sites by posting water conservation reminders.
- Incorporate water-saving strategies in landscaping and gardening projects.
- Reduce the amount of water used for car washing whenever possible.

### **BUILDING MAINTENANCE STAFF RESPONSIBILITIES:**

- Evaluate all existing water systems to identify opportunities where efficiency can be increased.
- Perform maintenance and/or replacement of all leaking water lines, valves, spigots, and other water system components.

## Part 7: Procurement

**POLICIES:** The City of Morgantown commits to the following:

- To the extent possible, procure products using criteria established by the U.S. Environmental Protection Agency's Comprehensive Procurement Guidelines.
- Procure Energy Star-qualified products when available and practical.
- Procure environmentally preferable products and services using EPA's Environmentally Preferable Purchasing Program guiding principles:
  - Include environmental considerations as part of the normal purchasing process.
  - Emphasize pollution prevention early in the purchasing process.
  - Examine multiple environmental attributes throughout a product's or service's lifecycle.
  - Compare relevant environmental impacts when selecting products and services.
  - Collect and base purchasing decisions on accurate and meaningful information about environmental performance.

- Integrate environmental factors into the City's buying decisions where external authorities have not established criteria. Examples:
  - Replace disposables with reusables or recyclables.
  - Support eco-labeling practices by buying products bearing such labels in preference to others, where they are available and provide value for money.
  - Take into account lifecycle costs and benefits.
  - Evaluate, as appropriate, the environmental performance of vendors in providing products and services.
  - Integrate energy efficiency as a requirement in City contracts.
- Raise employee awareness of the environmental issues affecting procurement by providing relevant information and training.
- Encourage suppliers and contractors to offer environmentally preferable products and services at competitive prices.
- Encourage providers of services to consider environmental impacts of service delivery.
- Comply with all environmental legislative and regulatory requirements in the procurement of products and services.



Nothing in this policy shall be construed as requiring a department, agency, or contractor to procure products that do not perform adequately for their intended use or are not available at a reasonable price in a reasonable period of time.

More detailed procedures and guidelines may be established as necessary to ensure the continuation of a strong procurement program that saves energy and fuel use and reduces waste.

**RESPONSIBILITIES:** All City of Morgantown departments and offices shall identify and purchase products and services that are



available for the intended purpose and that meet the performance requirements. Factors that should be considered when determining the preferable good or service include, but are not limited to, the following:

- Minimization of virgin material use in product or service lifecycle
- Maximization of recycled products used in product or service lifecycle
- Environmental cost of entire product or service lifecycle
- Reuse of existing products or materials in product or service lifecycle
- Recyclability of product
- Minimization of packaging
- Reduction of energy/water consumption
- Toxicity reduction or elimination
- Elimination of uncertified hardwoods in product or service lifecycle
- Durability and maintenance requirements
- Ultimate disposal of product

#### DEPARTMENT HEAD RESPONSIBILITIES:

- Develop and maintain information about environmentally preferable products and recycled products containing the maximum practical amount of recycled materials to be purchased by employees, consultants, and contractors whenever possible.

#### *Examples of products described in the EPA's Comprehensive Procurement Guidelines*

- aluminum roofing with recovered materials content of 20-95%
- plastic trash bags with a post-consumer content of 10-100%
- bathroom tissue with 20-60% post-consumer fiber (sorry)
- reprographic (copy) paper with 30% post-consumer fiber
- plastic fencing with 60-100% post-consumer content or 90-100% recovered materials
- fertilizers made from up to 100% recycled organic materials

*Source: [www.epa.gov/epawaste/conserve/tools/cpg/products](http://www.epa.gov/epawaste/conserve/tools/cpg/products)*

- Inform employees and contractors of their responsibilities under this policy and provide implementation assistance.
- Institute product testing and trial service to evaluate environmentally responsible alternatives pursuant to established testing guidelines.
- Require the use of recycled materials and recycled products by incorporating them into bid specifications where practical.
- Disseminate information on recycled and environmentally preferable product procurement requirements, specifications, and performance to assist vendors with procurement opportunities with the City.
- Establish guidelines governing the review and approval of specifications for the procurement of selected materials based on considerations of recycling, energy and water conservation, lifecycle costing, and other environmental considerations.
- Consider maintenance costs before purchasing equipment that requires maintenance.

#### **GREEN TEAM RESPONSIBILITIES**

- As a report of policy impacts, annually tour City buildings and speak with Department Heads about the benefits of these policy changes.

**Sample Energy Star Procurement language:** *The vendor must provide products that earn the ENERGY STAR rating and meet the ENERGY STAR specifications for energy efficiency. The vendor is encouraged to visit [energystar.gov](http://energystar.gov) for complete product specifications and updated lists of qualifying products.*

**Sample RFP language:** *Our city has adopted policies to support an ethic of sustainability. To advance these goals, products and services contracted for will be evaluated in part based on their environmental attributes. Specific factors to be considered include greenhouse gas emissions, habitat impacts, regulatory compliance, recycled content, energy efficiency, water efficiency, and toxic chemical reduction. Please address these concerns when submitting your proposals.*

*Source: [energystar.gov](http://energystar.gov) and [nrdc.org](http://nrdc.org)*



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